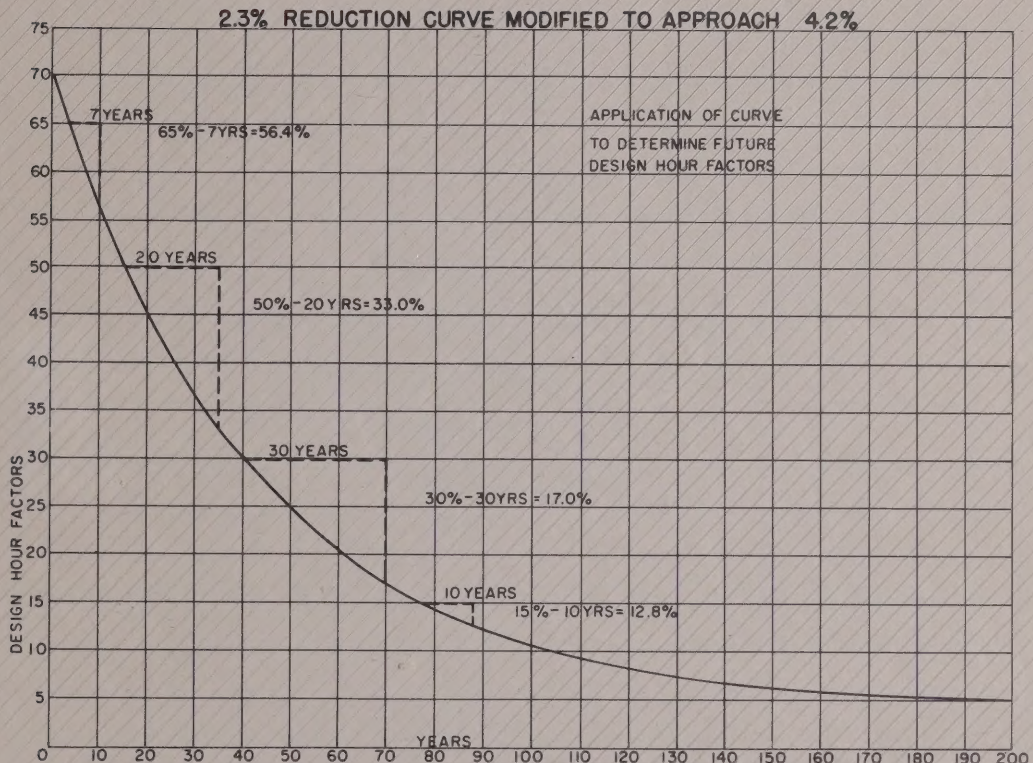
30TH. PEAK HOUR TREND



PRESENTED AT
HIGHWAY RESEARCH BOARD
JANUARY 1963

NEW JERSEY
STATE HIGHWAY DEPARTMENT

PREPARED BY

BUREAU OF PLANNING AND TRAFFIC

IN COOPERATION WITH THE

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BUREAU OF PUBLIC ROADS

30TH
PEAK HOUR
TREND

A PAPER
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Traffic, analysis

30TH PEAK HOUR FACTOR TREND

One of the problems of forecasting future traffic volumes is how the 30th peak hour ratio to the annual average daily traffic reacts to the increase in the annual average daily traffic. Experience has indicated that the design hour volume rate of growth is not in the same ratio as the rate of growth of the AADT although in the Highway Capacity Manual and AASHO Policy on Geometric Design Rural Highways, the following recommendations are made:

1. Highway Capacity Manual, United States Department of Commerce, dated 1950, page 140: "The thirtieth highest hourly volume on a percentage basis changes very little from year to year."

Page 142: "For example, if conditions indicate that a 20 percent rise in the annual average may be expected in 10 years, a similar 20 percent increase should be expected in the thirtieth highest hour; that is, if the facility is able to handle that much traffic."

2. Policy on Geometric Design Rural Highways, AASHO, dated 1954, page 56. "Thus, the percentage of ADT for 30 HV from current traffic data on a given facility generally can be used with confidence in computing the 30 HV from an ADT volume determined for some future year. This consistency may not hold in instances where there is change in the use of the land area served by the highway. In such case, where the character and magnitude of future development can be foreseen, the relation of 30 HV to ADT may be based on experience with other highways serving areas with similar land-use characteristics."

Mr. Walker's findings, as reported in HRB Bulletin 167 in 1957 showed that the earlier assumptions of factor consistency was incorrect and that downward trends generally existed over the years.

PURPOSE OF STUDY

The purpose of this study was to determine the relationship of the design hour factors to the annual average daily traffic in the hope that trends developed would furnish us with a guide to predict future design hour factors.

DATA USED FOR STUDY

Sixty-nine counting stations that have been in operation in New Jersey for 10 years were selected as the basis of this study, as they furnished us with the ADT, DHV and DHV factors.

An analysis of these 69 stations indicated the following data:

The Stations were located in all of New Jersey's 21 counties.

The ADT volumes ranged from 1,022 to 35,064 (one way)

The DHV's ranged from 200 to 4,280 (one way)

The DHV factors ranged from 7.6 to 71.5 (one way)

Sixteen locations are permanent counting stations and are counted 365 days per year.

Twenty-one locations are major counting stations and are counted one week out of every four.

Thirty-two locations are minor counting stations and are counted for one week out of every eight.

Thirty-six of the locations are located on rural highways and thirty-three locations are on urban highways.

(See tables 1 and 2 for further breakdown of stations)

NOTE: All volumes quoted in this study are one-way volumes.

GROUPING OF STATIONS FOR STUDY

Since the design hour factor trends were the main purpose of this study, the 69 locations were grouped according to their 1951 design hour factors as follows:

DHV % GROUPS	STATIONS IN GROUP
10% or Less	7
10% - 15%	21
15% - 20%	15
20% - 25%	11
25% - 30%	5
30% - 40%	4
40% - 50%	3
50% - Plus	3

The average ADT, DHV, and DHV factors were calculated for each of the groups and the results and trends of the DHV factors are plotted in figure 1.

Figure 2 shows the cumulative number of traffic counter locations having DHV factors of various values for 1951 and 1960. Figures 1 and 2 definitely show that the DHV factors have reduced over the 10 year period.

The yearly trend reduction rate for each group is as follows: (see figure 1)

DHV % GROUPS	TREND % YEARLY CHANGE
10% or Less	+ 0.067
10% – 15%	- 0.133
15% – 20%	- 0.370
20% – 25%	- 0.609
25% – 30%	- 0.684
30% – 40%	- 0.597
40% – 50%	- 1.033
50% – Plus	- 1.190

From the above, it is clear that the reduction rate for the higher design hour factors are much greater than for the low design hour factors. These trend changes are similar to those in Table 1 of Mr. Walker's "Trends in 30th hour factors." Highway Research Board Bulletin 167, dated 1957.

The high design hour factor roads are generally those in sparsely populated areas. As the population and development along these roads increase the design hour volume increases but not in the same proportion as the ADT. This causes the design hour factors to decrease at their group reduction rate. When the design hour factor has reached a lower group rate it then decreases at the new group rate. This cycle continues as the factor becomes smaller.

DETERMINATION OF REDUCTION RATE AND CURVE

To determine a trend rate of reduction for the DHV factors a logarithmic straight line trend was calculated based on the average DHV factors of all the groups. This trend gave a reduction rate of 2.3% compounded per year.

The exponential curve $Y = ab^x$, which represents a trend with a constant rate of decrease, was used to plot a curve. This curve seemed to reasonably fit the basic data; however, this curve approaches zero and the design hour factors can never be less than 4.2% of ADT (100 divided by 24 hours).

To correct this 4.2 was added to all points on the curve and to the basic data so that it would fit the curve. This curve can then be expressed by the equation $Y = b^x(a - 4.2) + 4.2$ (See figure 3)

APPLICATION OF CURVE AND REDUCTION RATE

The following is a table of existing DHV factors and their future DHV factors for five year intervals based on the equation:

$Y = b^x (a - 4.2) + 4.2$ where

Y = future DHV factor
b = rate of reduction (constant .977 based on 2.3 % compounded)
x = No. of future years
a = existing DHV factor

$$Y = b^x \; (a - 4.2) + 4.2$$

FUTURE DHV FACTORS

a	X = 5	X = 10	X = 15	X = 20	X = 25	X = 30	X = 50	X = 100
100	89.5	80.1	71.7	64.4	57.8	51.9	34.1	13.6
90	80.6	72.2	64.7	58.1	52.2	46.9	31.0	12.6
80	71.7	64.2	57.6	51.8	46.6	41.9	27.8	11.6
70	62.8	56.3	50.6	45.5	41.0	37.0	24.7	10.6
60	53.9	48.4	43.5	39.2	35.4	32.0	21.6	9.7
55	49.4	44.4	40.0	36.1	32.6	29.5	20.0	9.2
50	45.0	40.5	36.5	33.0	29.8	27.0	18.5	8.7
45	40.5	36.5	33.0	29.8	27.0	24.5	16.9	8.2
40	36.1	32.6	29.4	26.7	24.2	22.0	15.4	7.7
35	31.6	28.6	25.9	23.5	21.4	19.5	13.8	7.2
30	27.2	24.6	22.4	20.4	18.6	17.0	12.2	6.7
25	22.7	20.7	18.9	17.3	15.8	14.6	10.7	6.2
22.5	20.5	18.7	17.1	15.7	14.4	13.3	9.9	6.0
20	18.3	16.7	15.3	14.1	13.0	12.1	9.1	5.7
17.5	16.0	14.7	13.6	12.6	11.6	10.8	8.3	5.5
15	13.8	12.8	11.8	11.0	10.2	9.6	7.6	5.3
12.5	11.6	10.8	10.1	9.4	8.8	8.3	6.8	5.0
10	9.4	8.8	8.3	7.8	7.4	7.1	6.0	4.8
7.5	7.1	6.8	6.5	6.3	6.0	5.8	5.2	4.5
5	4.9	4.8	4.8	4.7	4.6	4.6	4.4	4.3

$b^1 = .977$ $b^{25} = .559$

$b^5 = .890$ $b^{30} = .498$

$b^{10} = .792$ $b^{50} = .312$

$b^{15} = .705$ $b^{100} = .098$

$b^{20} = .628$

DHV FACTORS vs ADT

To determine the magnitude of the 30th peak hour factors for various volumes of traffic, the 69 counting locations were grouped as follows:

One Way ADT Group	Number of Stations
2000 or Less	10
2000 – 3000	11
3000 – 5000	15
5000 – 10,000	18
10,000 – Plus	15

The average DHV factors of each group was calculated and the following are the results:

One Way ADT Group	1951 DHV %	1960 DHV %	10 Year Change	Annual Change
2000 or Less	28.3	21.1	- 7.2	- 0.7
2000 – 3000	25.8	18.8	- 7.0	- 0.7
3000 – 5000	21.5	16.8	- 4.7	- 0.5
5000 – 10,000	19.7	15.2	- 4.5	- 0.5
10,000 – Plus	11.8	10.3	- 1.5	- 0.15

(See figure 4)

The following table shows the DHV factor range for each ADT (one way) group in 1951 and 1960 and the average DHV factor.

	1951		1960	
One Way ADT Group	Range DHV %	Average DHV %	Range DHV %	Average DHV %
2000 or Less	60.0–12.6	28.3	56.8–12.1	21.1
2000 – 3000	54.4–12.7	25.8	39.9– 9.4	18.8
3000 – 5000	49.6– 9.1	21.5	29.6– 9.1	16.8
5000 – 10,000	32.4– 9.2	19.7	22.2– 8.7	15.2
10,000 – Plus	17.8– 8.3	11.8	14.0– 7.6	10.3

(See figure 5)

Figures 4 and 5 show that the high design hour factors are on low volume roads and high volume roads do not have high design hour factors; However, Figure 5 indicates that it is possible for both high and low volumes to have low design hour factors.

DHV FACTORS vs POPULATION CHANGES

Since it was felt that the population of the area might influence the DHV factor, an analysis was made at the 69 counting stations of the change in population and DHV factors. The population figures used were both those of the municipality and the county in in which the counting station was located. Figures 6 and 7 show the results, which indicates that an increase in population was accompanied by a decreased DHV factor. Samples of decreased population are too few to be significant. See table 4

The average DHV factor and population of the station municipality for each DHV factor group was calculated for 1951 and 1960 and Figure 8 shows these data. This also supports the theory that a change in population of the area influences the DHV factors.

DHV FACTORS vs ROADWAY CAPACITY

To determine if the capacity of the roadway had any influence on the DHV factors, the satisfactory(1) capacity and the tolerable(2) capacity were determined for each of the 69 counting locations used in this study. Having the yearly DHV for each location the number of locations over or under these capacities was found for 1951 and 1960. Table 3 shows the results by DHV factor groups.

An analysis of the 69 locations as to the influence of the capacity on the DHV factor clearly indicated that the capacities had little influence on the DHV factors, as those over or under either of these capacities, reacted like their respective group's DHV factors.

NOTE: (1) Satisfactory Capacity = a level of service with 750 cars per hour one way for one way of a 2 lane road and 1950 cars per hour on 2 lanes of a 4 lane road.

(2) Tolerable Capacity = a level of service with 1000 cars per hour on one way of a 2 lane road and 2400 cars per hour on one way of a four lane road.

If the theory that capacities influenced the DHV factor to any extent is correct, then DHV factors would increase as the ADT decreased but this is not so.

The following table is a list of such locations and it can clearly be seen that the DHV factors were reduced as well as the ADT and DHV which indicates that capacity had little influence on the DHV factors:

LOCATIONS WITH DECREASES IN ADT AND A DECREASE IN DHV FACTORS

Route US 1, New Brunswick Middlesex County	1951	1952
ADT (1 Way)	21,443	16,105
DHV Factor	11.0	10.4
DHV (1 Way)	2,360	1,670

Route US 130, Pennsauken Camden County	1951	1952
ADT (1 Way)	11,953	9,432
DHV Factor	11.6	9.6
DHV (1 Way)	1,390	910

Route US 130, Bordentown Burlington County	1951	1952
ADT (1 Way)	10,083	5,636
DHV Factor	12.1	9.5
DHV (1 Way)	1,220	540

Route US 130, E. Windsor Mercer County	1951	1952
ADT (1 Way)	8,670	4,823
DHV Factor	12.4	10.1
DHV (1 Way)	1,080	490

Route US 9, Pine Beach Ocean County	1954	1955
ADT (1 Way)	3,261	2,951
DHV Factor	20.1	17.2
DHV (1 Way)	660	510

Route US 9, Freehold Monmouth County	1953	1954
ADT (1 Way)	4,391	3,901
DHV Factor	26.4	25.4
DHV (1 Way)	1,160	990

Route 35, Middletown Monmouth County	1954	1955
ADT (1 Way)	9,429	9,307
DHV Factor	17.4	14.5
DHV (1 Way)	1,640	1,350

Route 35, Brielle Monmouth County	1954	1955
ADT (1 Way)	6,941	6,310
DHV Factor	19.6	17.9
DHV (1 Way)	1,360	1,130

Routes 33 & 34 Wall Monmouth County	1954	1955
ADT (1 Way)	7,084	6,202
DHV Factor	27.4	24.5
DHV (1 Way)	1,940	1,520

The following list of locations with increases in ADT is used to emphasize the fact that the DHV increase is not in the same proportion as the increase in the ADT, which is the chief reason for the DHV factors decreasing:

LOCATIONS WITH INCREASES IN ADT AND A DECREASE IN DHV FACTORS

Garden State Parkway, Clark Union County	1952	1960
ADT (1 Way)	8,519	33,673
DHV Factor	20.3	12.4
DHV (1 Way)	1,730	4,180

Route 4, Paramus Bergen County	1951	1960
ADT (1 Way)	18,393	31,240
DHV Factor	11.8	9.3
DHV (1 Way)	2,170	2,910

Route US 22, Hillside Union County	1950	1960
ADT (1 Way)	20,580	31,511
DHV Factor	12.0	10.1
DHV (1 Way)	2,470	3,180

Route US 206, Bordentown Burlington	1951	1960
ADT (1 Way)	7,221	10,953
DHV Factor	12.4	9.7
DHV (1 Way)	900	1,060

Route US 46, Clifton Passaic County	1951	1960
ADT (1 Way)	12,424	21,976
DHV Factor	13.4	10.8
DHV (1 Way)	1,660	2,370

Route 3, Clifton Passaic County	1951	1960
ADT (1 Way)	17,259	30,802
DHV Factor	14.2	12.3
DHV (1 Way)	2,450	3,790

Route 69, Hopewell Mercer County	1951	1960
ADT (1 Way)	3,064	4,231
DHV Factor	15.2	10.9
DHV (1 Way)	470	460

Route 18, Madison Middlesex County	1951	1960
ADT (1 Way)	3,409	7,362
DHV Factor	22.1	13.6
DHV (1 Way)	750	1,000

Route US 46, Ledgewood Morris County	1951	1960
ADT (1 Way)	8,010	12,466
DHV Factor	27.1	17.1
DHV (1 Way)	2,170	2,130

Route 23, Pequannock Morris County	1951	1960
ADT (1 Way)	5,868	10,634
DHV Factor	32.4	19.7
DHV (1 Way)	1,900	2,090

Route 73, Voorhees Camden County	1951	1960
ADT (1 Way)	3,007	6,321
DHV Factor	49.6	29.6
DHV (1 Way)	1,490	1,870

The present recommended method of determining future DHV's is to apply the present DHV factors to the predicted future ADT.

Since this study indicated that the DHV factors reduce and do not remain constant a comparison is made of the 1960 actual DHV's with the predicted 1960 DHV's by both methods at the 69 locations used in this study and at 19 locations that have been in operation only seven years.

The following are the results of that comparison, showing at how many locations the predicted DHV's were cloest to the actual DHV.

Number of Actual DHV Locations		No. of Locations Est. DHV by Trend Methods Closest to Actual DHV	No. of Locations Est. DHV by No Change Method Closest to Actual DHV
1951–1960	69	50	19
1953–1960	19	13	6
Total	88	63	25

The above clearly indicates that predicting the future DHV by use of the trend curve, developed by this study, is a more reliable method than the no change method.

CONCLUSIONS

1. The 30th peak hour factors generally decline as the annual average daily traffic increases.

2. The reduction rate for high 30th peak hour factors is much greater than for low 30th peak hour factors.

3. Low population and sparsely developed areas, on the average, have a high 30th peak hour factor. Any marginal growth, such as housing developments, industry, or shopping centers, tends to lower the design hour factors.

4. Population changes in an area influence the DHV factors accordingly; an increase in population decreases the factors.

5. The capacity of a roadway has no great influence on the DHV factors or the rate of change. It is the increase in ADT due to the increase in the off hours that tends to reduce the DHV ratio to the ADT. Nevertheless, it is recognized that logically, when the potential 30th peak hour volume greatly exceeds the possible (absolute) capacity, (such as may be experienced when the number of lanes are reduced for construction), the 30th peak hour factor may be reduced. But this is not supported by the study. This degree of over capacity condition has not been permitted to persist in New Jersey; therefore, this theory could not be tested.

REFERENCES

Highway Capacity Manual, Part VIII, United States Department of Commerce, 1950

Highway Research Board Bulletin 167 "Trends in 30th – Hour Factor" by William P. Walker.

APPLICATION OF REDUCTION CURVE, FIGURE 11, to determine design hour factor for any future year when existing factor is known.

1. Locate the existing DHV factor on the curve and determine the year at this point.
2. This year point plus the number of future years for which the DHV factor is desired will locate the point on the curve where the future DHV factor can be read.

EXAMPLE

Existing DHV factor 50%.

What will it be in 20 years?

1. Under 50% point on curve the year 15 is located.
2. 15 + 20 = 35

   Above the year 35 the DHV factor of 33% is found.

Therefore if the existing DHV factor is 50% in 20 years hence it will be 33%.

ESTIMATING THE 30TH PEAK HOUR

Four representative weekly counts of 168 hours each, one for each of the four seasons of the year, are selected as samples for each control counting station. The hourly volumes of traffic are then tabulated on a frequency table in an array arranged in convenient volume classes from the highest to the lowest volume. Since these four weeks of counts account for 672 hours, the total number of hours in each volume class is expanded by using a factor of 13. The total number of expanded hours then becomes 8736 hours which is 24 hours short of the number of hours in a 365 day year.

The average volume for each class is divided by the annual average daily total for the station and percentages are computed for use as ordinates on the final graph. These ordinates are plotted against abscissas derived from an array of the accumulated hours from the 13th to the 8736th hour.

The 30th peak hour is then estimated from the curve that was produced on the graph.

	1951						1960					
	A. A.D. T.		D. H. V.		D. H. V. %		A. A.D. T.		D. H. V.		D. H. V. %	
GROUP	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE	RANGE	AVERAGE
10 % LESS	29,235 3,887	13,140	2,430 350	1,310	8.3 9.3	9.0	25,550 4,929	15,450	2,480 460	1,470	8.4 12.1	9.8
10 % – 15 %	28,657 1,658	10,660	3,070 210	1,310	10.2 14.5	12.5	34,557 2,204	14,080	3,790 270	1,510	7.6 14.9	11.0
15 % – 20 %	16,425 1,161	4,400	2,920 200	760	15.2 18.8	17.1	22,115 1,489	6,150	3,100 240	820	10.9 16.4	13.4
20 % – 25 %	8,396 1,155	5,100	2,070 260	1,180	20.8 24.7	22.8	33,673 2,615	9,930	4,180 620	1,550	12.4 24.3	17.1
25 % – 30 %	8,010 1,022	4,820	2,170 280	890	25.0 29.0	26.9	12,466 1,689	6,580	2,130 290	1,350	17.1 23.8	20.7
30 % – 40 %	5,868 2,523	4,020	1,900 950	1,320	30.7 37.7	33.2	10,634 4,094	6,860	2,100 1,420	1,700	19.7 34.6	26.6
40 % – 50 %	3,007 1,426	2,000	1,490 580	910	41.0 49.6	45.0	6,321 2,223	4,270	1,870 800	1,330	29.6 35.8	32.7
50 % PLUS	2,265 1,420	1,980	1,230 850	1,070	50.4 60.0	54.9	2,967 1,379	2,130	1,180 640	870	31.7 56.8	42.8

TABLE 1

30th HOUR FACTOR GROUPS	STATIONS	PERMANENT CONTROL	MAJOR CONTROL	MINOR CONTROL	RURAL	URBAN	1951 A. D. T. GROUPS 1 – WAY					ROAD TYPE			
							0 to 2000	2000 to 3000	3000 to 5000	5000 to 10,000	10,000 PLUS	2 LANES	4 LANES	DUAL	VARIABLE
10 % LESS	7	0	6	1	2	5	0	1	1	1	4	3	2	2	0
10 % – 15 %	21	4	4	13	5	16	1	2	4	4	10	6	1	14	0
15 % – 20 %	15	5	2	8	12	3	3	4	3	4	1	10	2	2	1
20 % – 25 %	11	2	3	6	4	7	2	1	2	6	0	4	1	6	0
25 % – 30 %	5	3	1	1	4	1	1	0	2	2	0	2	0	3	0
30 % – 40 %	4	1	2	1	3	1	0	1	2	1	0	1	1	2	0
40 % – 50 %	3	0	2	1	3	0	2	0	1	0	0	2	0	1	0
50 % PLUS	3	1	1	1	3	0	1	2	0	0	0	3	0	0	0
TOTAL	69	16	21	32	36	33	10	11	15	18	15	31	7	30	1
	100%	23%	31%	46%	52%	48%	14%	16%	22%	26%	22%	45%	10%	44%	1%

TABLE 2

LOCATIONS OVER SATISFACTORY OR TOLERABLE CAPACITY

D. H. V. % GROUP	NO. OF STAS.	1951								1960							
		SATISFACTORY CAPACITY				TOLERABLE CAPACITY				SATISFACTORY CAPACITY				TOLERABLE CAPACITY			
		OVER	%	UNDER	%	OVER	%	UNDER	%	OVER	%	UNDER	%	OVER	%	UNDER	%
10 % LESS	7	2	29	5	71	1	14	6	86	3	43	4	57	1	14	6	86
10 % – 15 %	21	6	29	15	71	3	14	18	86	9	43	12	57	5	24	16	76
15 % – 20 %	15	2	13	13	87	2	13	13	87	2	13	13	87	1	7	14	93
20 % – 25 %	11	4	36	7	64	0	–	11	100	4	36	7	64	1	9	10	91
25 % – 30 %	5	2	40	3	60	1	20	4	80	2	40	3	60	1	20	4	80
30 % – 40 %	4	1	25	3	75	0	–	4	100	2	50	2	50	1	25	3	75
40 % – 50 %	3	0	0	3	100	0	–	3	100	1	33	2	67	0	–	3	100
50 % PLUS	3	3	100	0	–	2	67	1	33	2	67	1	33	1	33	2	67
TOTAL	69	20	29	49	71	9	13	60	87	25	36	44	64	11	16	58	84

TABLE 3

D. H. V. FACTORS VS. POPULATION CHANGES

D. H. V. FACTOR GROUP	NO. OF STAS.	10 YEAR POPULATION INCREASE		10 YEAR POPULATION DECREASE	
		D.H.V. FACTOR INCREASE	D.H.V. FACTOR DECREASE	D.H.V. FACTOR INCREASE	D.H.V. FACTOR DECREASE
10% – Less	7	3	2	2	0
10% – 15%	21	2	17	0	2
15% – 20%	15	0	15	0	0
20% – 25%	11	1	9	0	1
25% – 30%	5	0	5	0	0
30% – 40%	4	0	4	0	0
40% – 50%	3	0	3	0	0
50% – Plus	3	0	3	0	0
TOTAL	69	6	58	2	3

TABLE 4

GROUP AVERAGE DHV FACTOR TRENDS

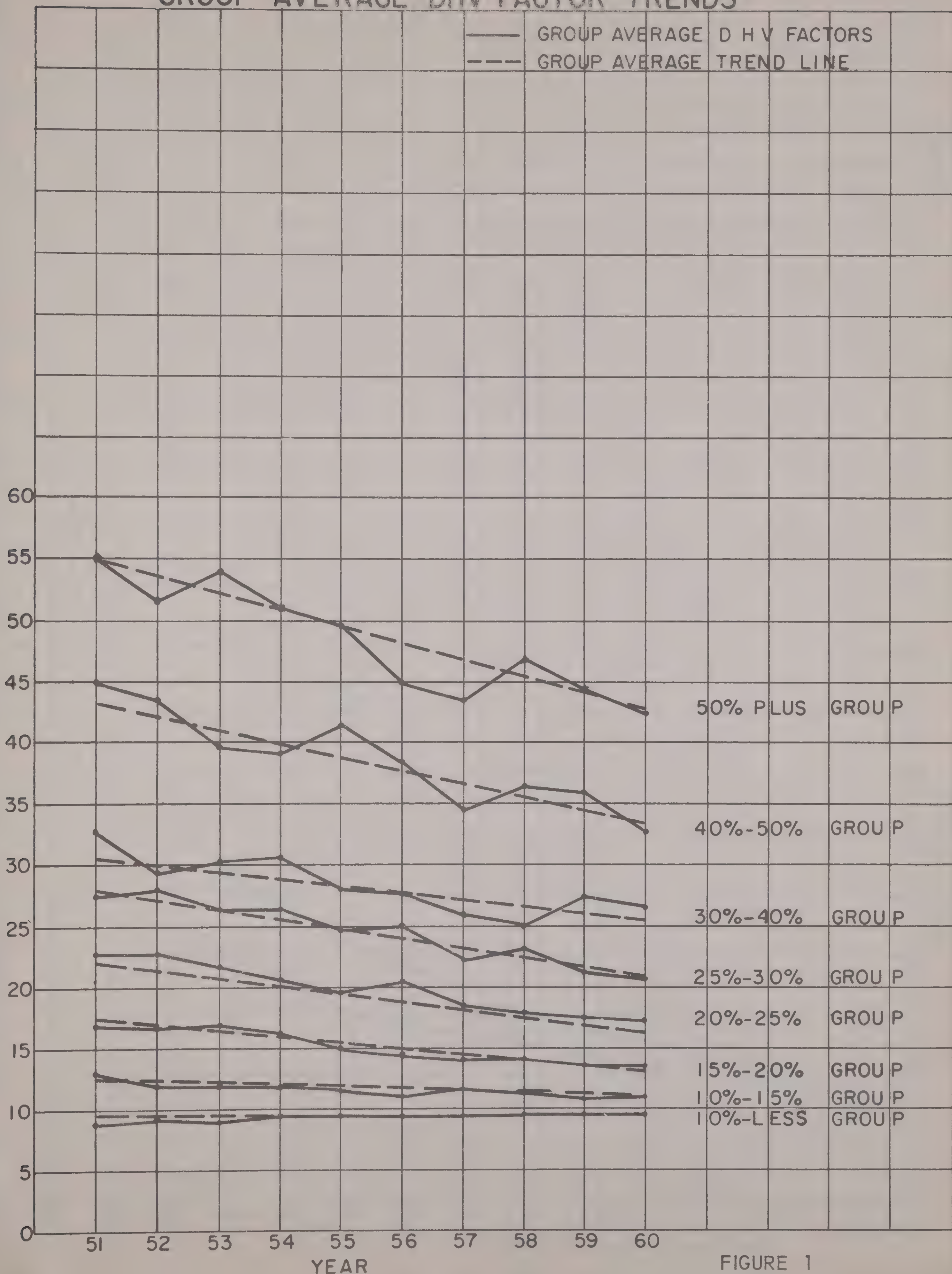

FIGURE 1

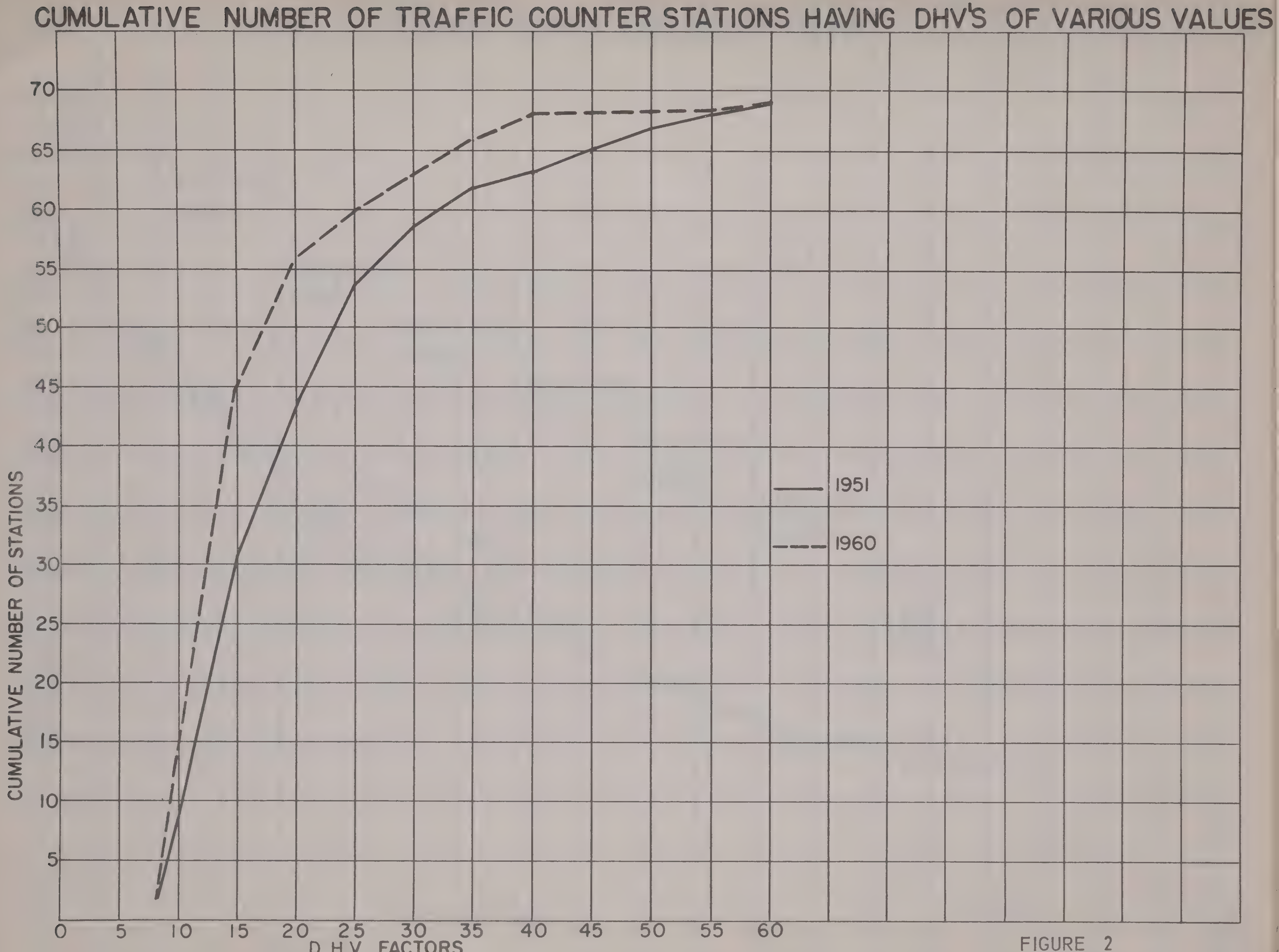
CUMULATIVE NUMBER OF TRAFFIC COUNTER STATIONS HAVING DHV'S OF VARIOUS VALUES
CUMULATIVE NUMBER OF STATIONS
D.H.V. FACTORS
1951
1960
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70

FIGURE 2

TREND CURVE AND BASIC DATA

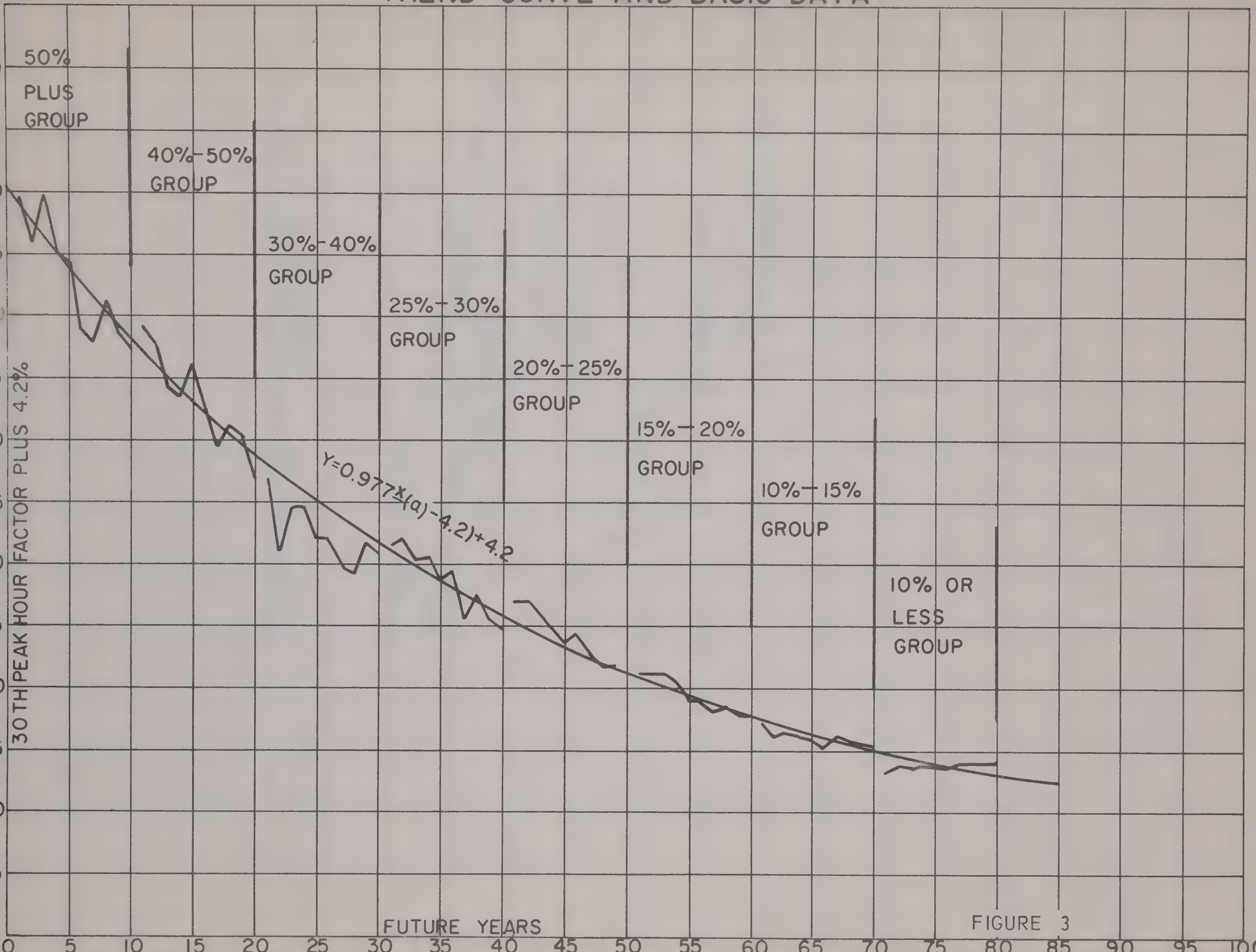

FIGURE 3

A.D.T. GROUP DHV FACTOR TRENDS

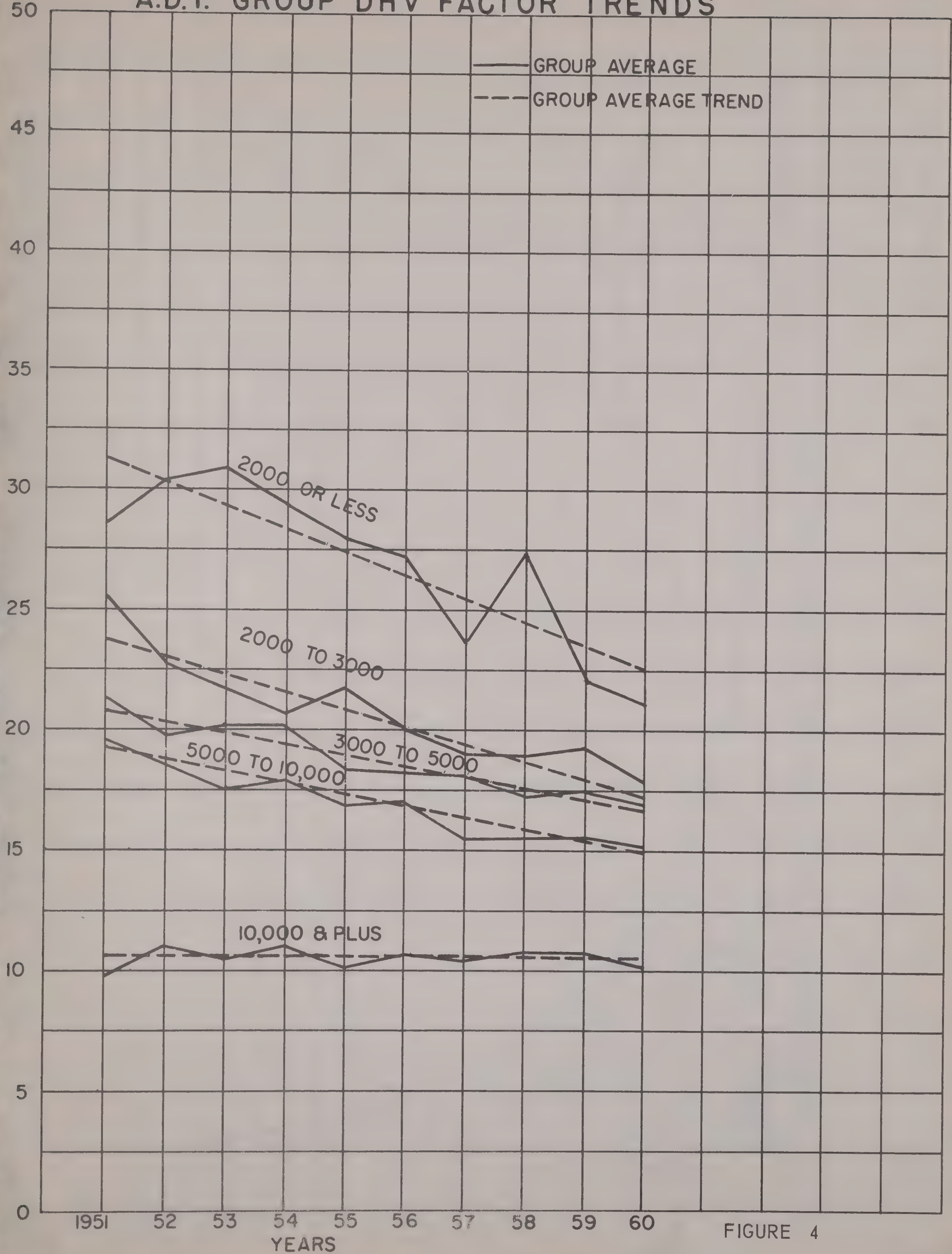

FIGURE 4

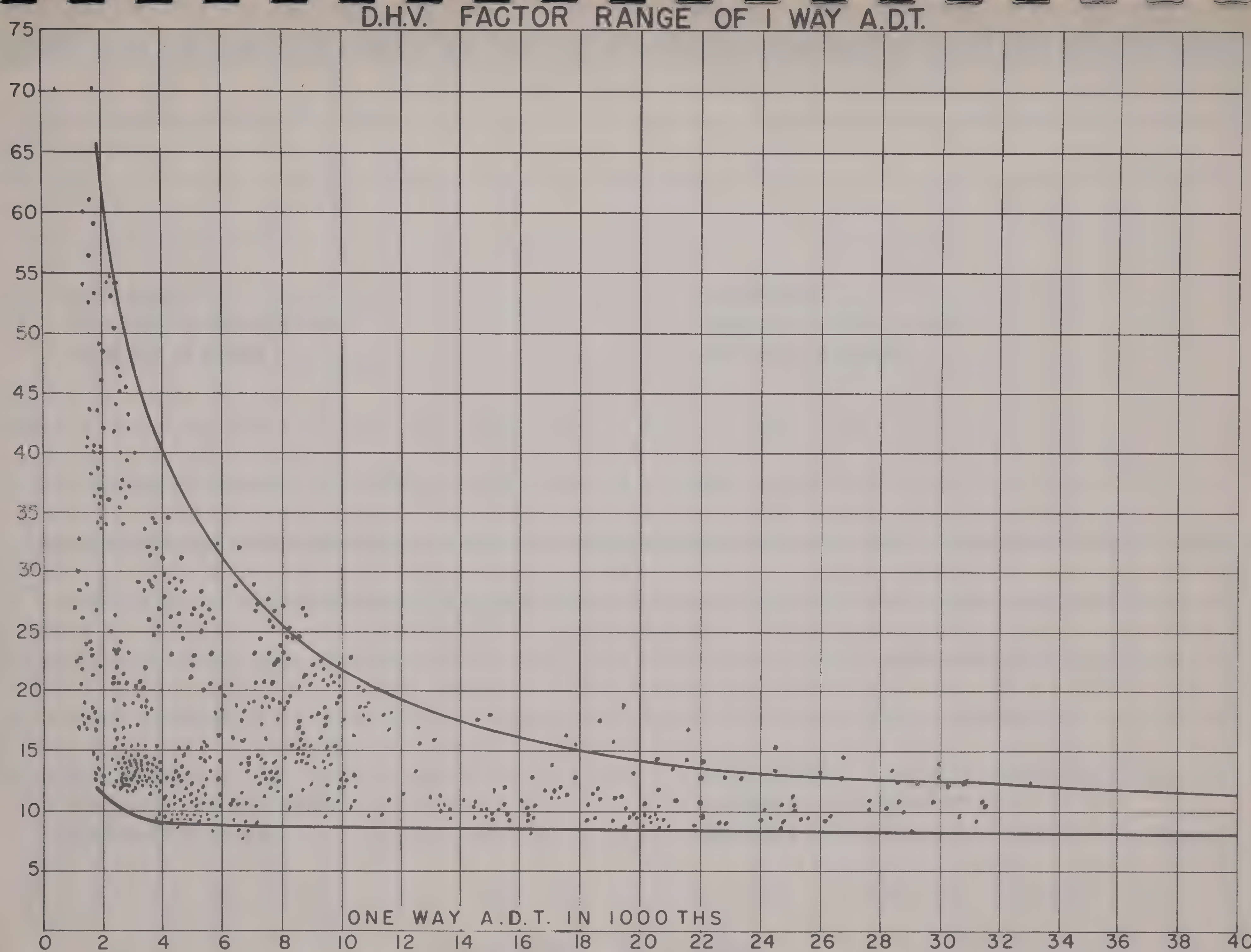
D.H.V. FACTOR RANGE OF 1 WAY A.D.T.
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
ONE WAY A.D.T. IN 1000THS
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40

FIGURE 5

10 YR. STATION DHV% CHANGE VS. 10 YR. POPULATION CHANGE OF STATION MUNICIPALITY

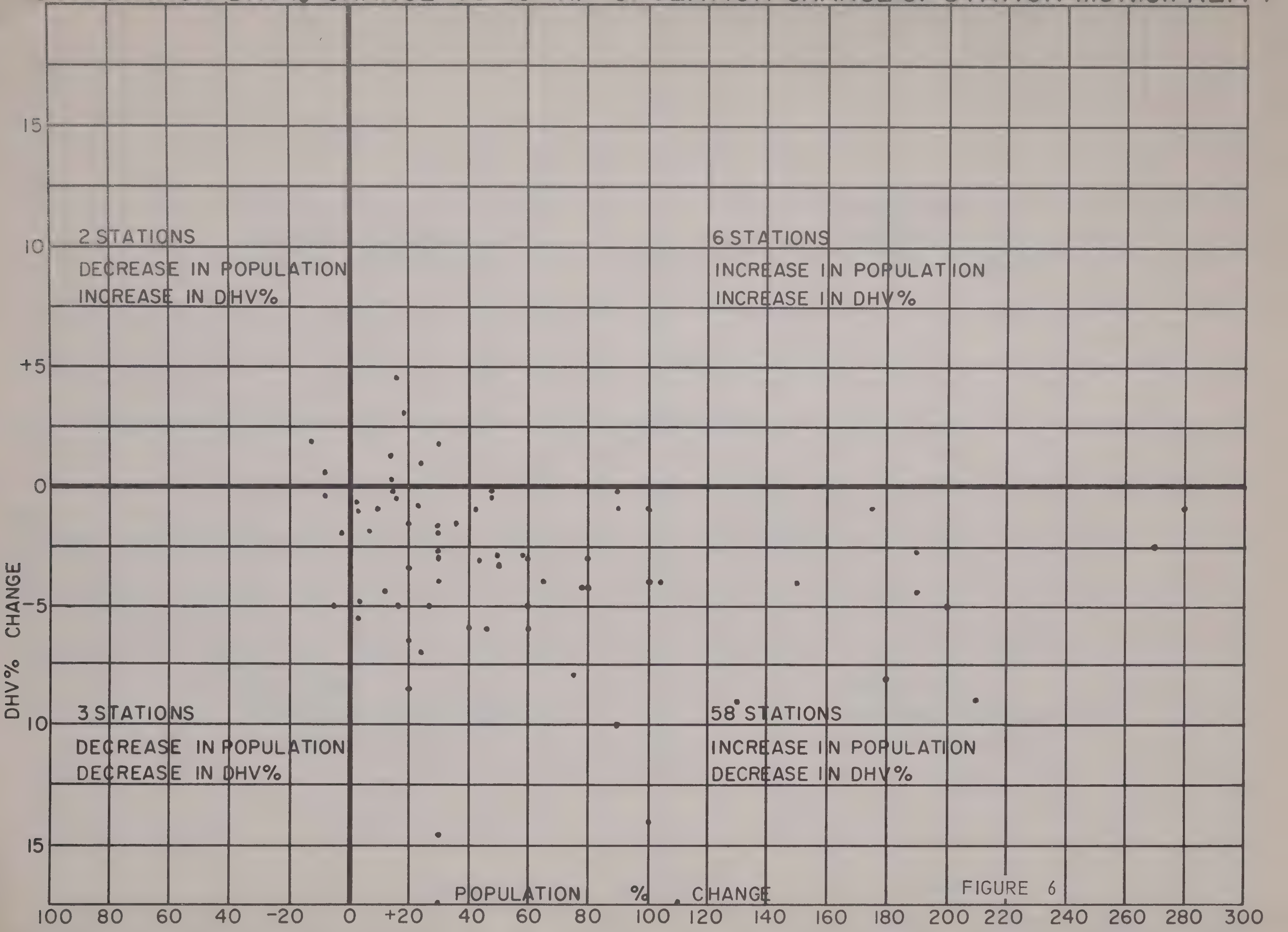

FIGURE 6

10YR. STATION DHV% CHANGE VS. 10YR. POPULATION CHANGE OF STATION COUNTY

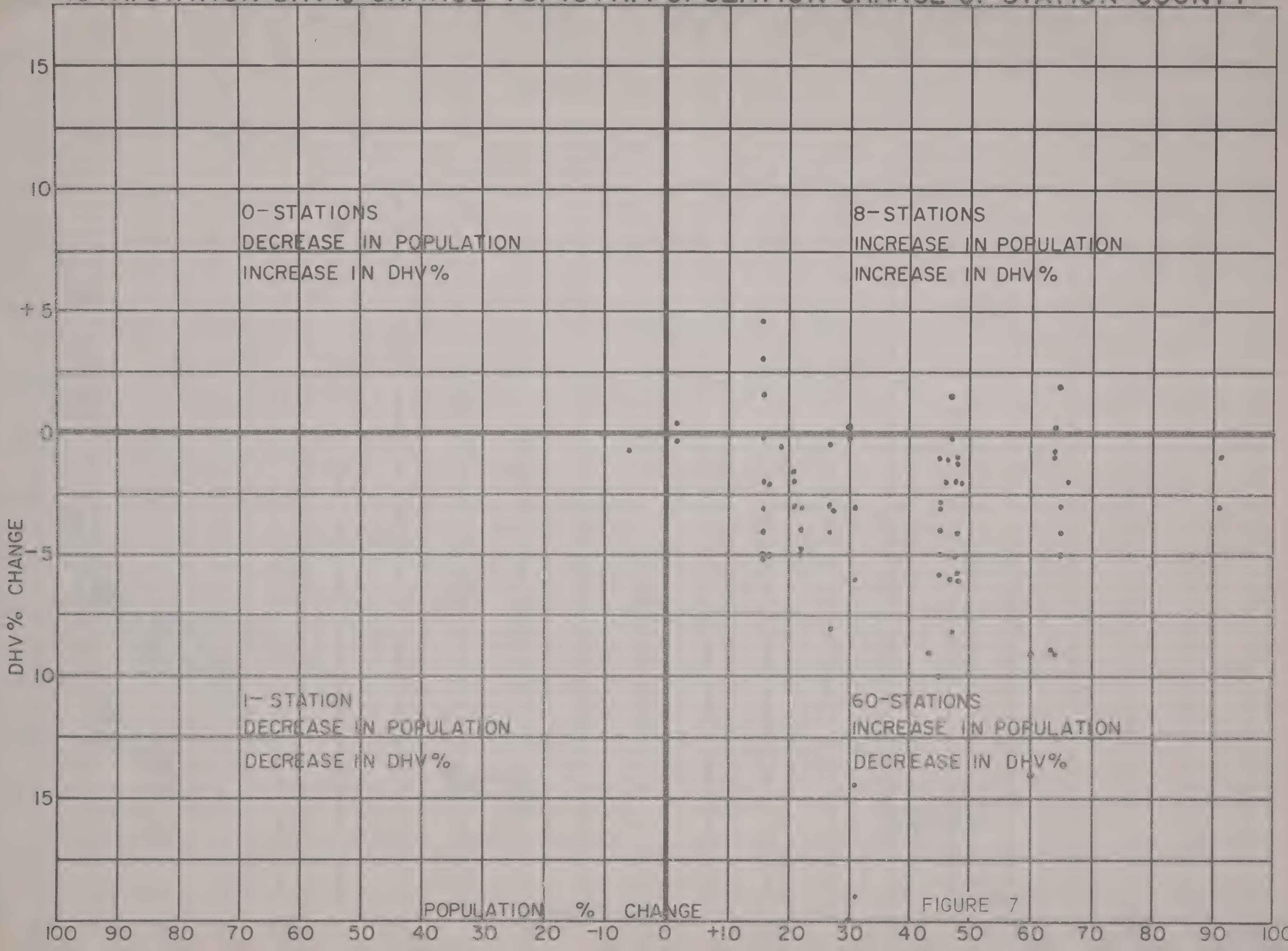

FIGURE 7

GROUP AVERAGE DHV% VS GROUP AVERAGE POPULATION

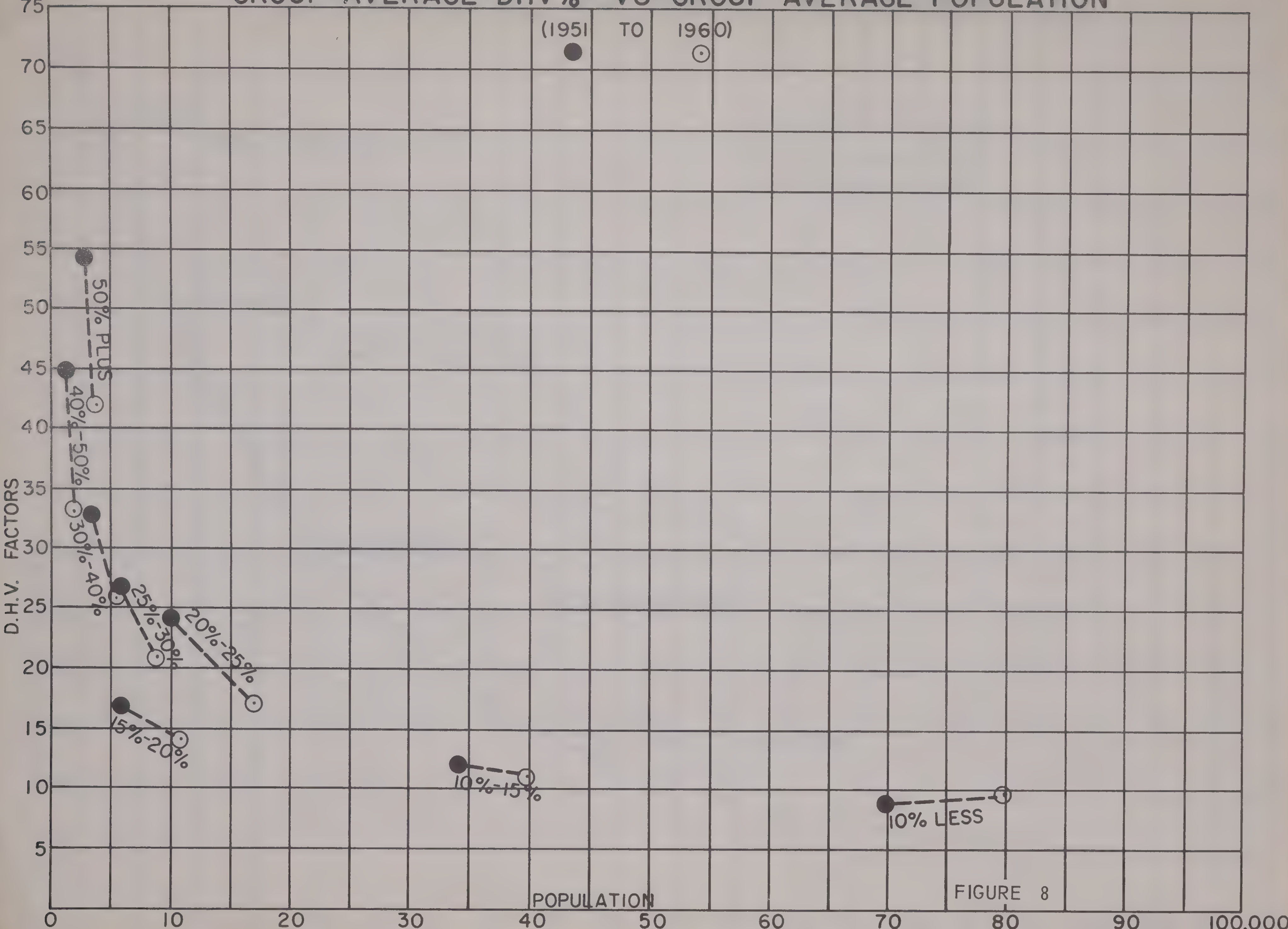

FIGURE 8

2.3% REDUCTION CURVE MODIFIED TO APPROACH 4.2%